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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,081	03/01/2002	Takayuki Yamamoto	220119US0	9114

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1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

JACKSON, MONIQUE R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,081

Applicant(s)

YAMAMOTO ET AL.

Examiner

Monique R. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 8-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some.* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The amendment filed 4/15/05 has been entered. Claims 1-4 and 8-15 are pending in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1-4 and 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tada et al for the reasons recited in the prior office action and restated below.
4. Tada et al teach an anticorrosive coating composition for metal substrates such as steel substrates that may be provided with a phosphate treatment prior to applying the coating composition (Col. 6, lines 33-44.) The coating composition comprises (A) epoxy resin, (B) an organic phosphorus compound, (C) zinc powder, and (D) a magnesium compound such as a magnesium salt, wherein the content of (C) is 30 to 95%, preferably 75 to 90%, by weight based on the total weight of non-volatile components in the composition and the content of (D) being from 0.1 to 5% by weight based on the total weight of the non-volatile components in the composition (Abstract.) Tada et al teach that the magnesium compound is quite effective in enhancement of the corrosion resistance and may be magnesium sulfate, magnesium phosphate, magnesium acetate, magnesium citrate, etc., with a particle size such as preferably passing through a 300 mesh sieve (Col. 4, line 64-Col. 5, line 25.) Tada et al further teach that the zinc powder has a particle size of 1 to 15 microns (Col. 4, lines 34-44), and the thickness of the coating is preferably from 5-20 microns (Col. 6, lines 24-26.)

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5. Though Tada et al teach weight percent ranges and particle size ranges that encompass or overlap the instantly claimed ranges, Tada et al do not specifically limit the invention to the instantly claimed values however one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the optimum amount and particle size of the zinc powder and magnesium compound to utilize within the ranges taught by Tada et al. With regards to instant Claim 13, Tada et al also teach that the composition may further include various compounds to improve corrosion resistance wherein among those listed are calcium salt compounds that may be employed in an amount of 0.1 to 1% by weight. Though Tada et al do not specifically teach the particle size of these calcium salts, one having ordinary skill in the art at the time of the invention would have been motivated to determine the optimum particle size considering it is well established in the art that particle size is a result effective variable in corrosion resistant coating compositions. With respect to instant Claim 9, though Tada et al teach that magnesium phosphate and calcium molybdenate may be included in the composition to improve corrosion resistance, Tada et al do not teach a metal phosphomolybdate salt rust inhibitor as instantly claimed. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to utilize a phosphomolybdate salt because it is recognized in the art to be an equivalent to the other materials listed as suitable compounds for improved corrosion resistance.

Response to Arguments

6. Applicant's arguments, see page 6, lines 1-9, filed 4/15/05, with respect to the anticipation rejection over Tada have been fully considered and are persuasive. The anticipation rejection of claims 1-4, 8, 10-12 and 14-15 has been withdrawn.

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7. Applicant's arguments and declaration filed 4/15/05 with regards to the obviousness rejection over Tada have been fully considered but are not persuasive. In the Applicant's response, the Applicant first argues that Tada requires an organic phosphorus compound while the instant invention provides improved corrosion resistance without the use of the organic phosphorus compound. The Applicant states that since Tada requires the organic compound, "it is improper to consider Tada" as the ground of obviousness of the present invention. However, the Examiner notes that the instant claims are drafted in open transition language and therefore do not exclude the addition of other compounds like the organic phosphorus compound taught by Tada. Hence, Tada is a proper reference that should be considered especially since Tada discloses all of the materials of the instantly claimed invention. Next, it appears as if the Applicant is continuing to argue two points that have been previously discussed in detail: 1-an alleged "synergistic" combination of zinc powder and metal salt rust inhibitor; and 2-alleged unexpected results with regards to a particle size not larger than 1.0 micron. However this time the Applicant now states that the "synergistic combination" is of the zinc powder and metal salt rust inhibitor having an average particle diameter no larger than 1 micron, thereby combining the two above points. The Applicant refers the Examiner to the attached Declaration filed 4/15/05 for support of the alleged "significant improvement in corrosion resistance" by this "synergistic combination." The Examiner has carefully reviewed the data presented in the declaration and notes that the results still fail to provide a clear showing of unexpected results. The Examiner first notes that Data 3 is essentially irrelevant in showing unexpected results over the closest prior art considering it does not include the magnesium compound and the closest prior art Tada clearly teaches the incorporation of the magnesium compound with the zinc powder. Next, the

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Applicant provides a new comparative example, Data 4 with a particle diameter of about 1.37 microns, which the Applicant states was obtained under the same conditions as Data 1 except for the average particle size (hence though not shown in detail, the Examiner assumes all other conditions were identical, i.e. zinc powder amount, type of rust inhibitor, and amount of rust inhibitor.) In comparing Data 1 to Data 4, the Examiner notes that there is little difference between the two points (about 0.1mm compared to about 0.13mm) and in fact, the experimental range of comparative Data 4 overlaps most of the experimental range of inventive Data 1 and includes values that fall within the Applicant's Rank A for Pitting Corrosion Resistance. Hence, the data fails to support the Applicant's arguments that an "unexpected" or "significant improvement" in corrosion resistance is provided by the instant invention over the teachings of the prior art, and in the absence of a clear showing of unexpected results, the Examiner maintains her position that the instant invention is obvious over the cited prior art.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508.

The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Monique R. Jackson
Primary Examiner
Technology Center 1700
June 29, 2005